



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/543,040	08/17/2006	Ali Hemmati Brivanlou	13794-105004	9176

65989 7590 12/11/2007  
KING & SPALDING  
1185 AVENUE OF THE AMERICAS  
NEW YORK, NY 10036-4003

EXAMINER
----------

DAVIS, MINH TAM B

ART UNIT	PAPER NUMBER
----------	--------------

1642

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

12/11/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptomailnyc@kslaw.com

## Office Action Summary

**Application No.**

10/543,040

**Applicant(s)**

BRIVANLOU ET AL.

**Examiner**

MINH-TAM DAVIS

**Art Unit**

1642

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-17 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Election/Restrictions*

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group 1, claim(s) 1-6, drawn to a method for treating hyperproliferative disorder, which is bladder cancer using an antibody to human TMEFF1.

Groups 2-9, claim(s) 1-6, drawn to a method for treating hyperproliferative disorder, which is breast cancer, colon cancer, leukemia, lung cancer, melanoma, pancreatic cancer, sarcoma, and uterine cancer, using an antibody to human TMEFF1. A method for treating each cancer constitutes a single, distinct invention.

Groups 10-27, claim(s) 1-6, drawn to a method for treating hyperproliferative disorder, which is bladder cancer, breast cancer, colon cancer, leukemia, lung cancer, melanoma, pancreatic cancer, sarcoma, and uterine cancer, using an antibody to rat or mouse TMEFF1. A method for treating each cancer, using an antibody to each of the TMEFF1 constitutes a single, distinct invention.

Groups 28-30, claim(s) 1-6, drawn to a method for treating a premalignant conditions, or benign cancer or benign dysproliferative disorder, using an antibody to human, rat or mouse

Art Unit: 1642

TMEFF1. A treating method, using an antibody to each of the TMEFF1 constitutes a single, distinct invention.

Groups 31-57, claim(s) 1-6, drawn to a method for preventing hyperproliferative disorder, which is breast cancer, colon cancer, leukemia, lung cancer, melanoma, pancreatic cancer, sarcoma, and uterine cancer, using an antibody to human, rat or mouse TMEFF1. A method for preventing each cancer, using an antibody to each of the TMEFF1 constitutes a single, distinct invention.

Groups 58-84, claim(s) 1-7, drawn to a method for treating hyperproliferative disorder, which is breast cancer, colon cancer, leukemia, lung cancer, melanoma, pancreatic cancer, sarcoma, and uterine cancer, using an antisense or dsRNA of human, rat or mouse TMEFF1 nucleic acid. A method for treating each cancer, using an antisense or dsRNA of each of the TMEFF1 constitutes a single, distinct invention.

Groups 85-111, claim(s) 1-7, drawn to a method for preventing hyperproliferative disorder, which is breast cancer, colon cancer, leukemia, lung cancer, melanoma, pancreatic cancer, sarcoma, and uterine cancer, using an antisense or dsRNA of human, rat or mouse TMEFF1 nucleic acid. A method for preventing each cancer, using an antisense or dsRNA of each of the TMEFF1 constitutes a single, distinct invention.

Groups 112-114, claim(s) 1-7, drawn to a method for treating a premalignant conditions, or benign cancer or benign dysproliferative disorder, using an antisense or dsRNA of human, rat or mouse TMEFF1 nucleic acid. A treating method, using an antisense or dsRNA of each of the TMEFF1 constitutes a single, distinct invention.

Art Unit: 1642

Groups 115-118, claims 8-9, drawn to a method for treating a disease, in which cell proliferation is desired, by promoting TMEFF1 function, using human, rat or mouse TMEFF1 polypeptide. A treating method, using each of the TMEFF1 polypeptides constitutes a single, distinct invention.

Groups 119-121, claims 8-9, drawn to a method for preventing a disease, in which cell proliferation is desired, by promoting TMEFF1 function, using human, rat or mouse TMEFF1 polypeptide. A preventing method, using each of the TMEFF1 polypeptides constitutes a single, distinct invention.

Groups 122-124, claims 8-9, drawn to a method for treating a disease, in which cell proliferation is desired, by promoting TMEFF1 function, using human, rat or mouse TMEFF1 nucleic acid. A treating method, using each of the TMEFF1 nucleic acids constitutes a single, distinct invention.

Groups 125-127, claims 8-9, drawn to a method for preventing a disease, in which cell proliferation is desired, by promoting TMEFF1 function, using human, rat or mouse TMEFF1 nucleic acid. A preventing method, using each of the TMEFF1 nucleic acids constitutes a single, distinct invention.

Groups 128-136, claims 10-11, drawn to a method for diagnosis of a disorder having an aberrant level of nodal, VG1 or BMP-2, comprising measuring the level of human, rat or mouse TMEFF1 polypeptide. A diagnosis method for each disorder, using each of the TMEFF1 polypeptides constitutes a single, distinct invention.

Groups 137-145, claims 10-11, drawn to a method for diagnosis of a disorder having an aberrant level of nodal, VG1 or BMP-2 comprising measuring the level of human, rat or mouse

TMEFF1 nucleic acids. A diagnosis method for each disorder, using each of the TMEFF1 nucleic acids constitutes a single, distinct invention.

Groups 146-154, claim 11, drawn to a method for diagnosis of a predisposition to a disorder having an aberrant level of nodal, VG1 or BMP-2, comprising measuring the level of human, rat or mouse TMEFF1 polypeptide. A diagnosis method for each disorder, using each of the TMEFF1 polypeptides constitutes a single, distinct invention.

Groups 155-163, claim 11, drawn to a method for diagnosis of a predisposition to a disorder having an aberrant level of nodal, VG1 or BMP-2 comprising measuring the level of human, rat or mouse TMEFF1 nucleic acids. A diagnosis method for each disorder, using each of the TMEFF1 nucleic acids constitutes a single, distinct invention.

Groups 164-167, claims 12-13, drawn to a method for increasing cell growth in animals, by inhibiting human, rat or mouse TMEFF1, using an antibody to human, rat or mouse TMEFF1. A method using each of the antibodies constitutes a single, distinct invention.

Groups 168-170, claims 12-13, drawn to a method for increasing cell growth in animals, by inhibiting human, rat or mouse TMEFF1, using an derivative of human, rat or mouse TMEFF1 polypeptide. A method using each of the derivatives constitutes a single, distinct invention.

Groups 171-173, claims 12-13, drawn to a method for increasing cell growth in animals, by inhibiting human, rat or mouse TMEFF1, using an antisense to human, rat or mouse TMEFF1 nucleic acid. A method using each of the antisenses constitutes a single, distinct invention.

Groups 175-177, claims 14-17, drawn to a method for differentiating stem cells, using an antibody to human, rat or mouse TMEFF1. A method using each of the antibodies constitutes a single, distinct invention.

Groups 178-180, claims 12-13, drawn to a method for increasing cell growth in plants, by inhibiting human, rat or mouse TMEFF1, using an antibody to human, rat or mouse TMEFF1. A method using each of the antibodies constitutes a single, distinct invention.

Groups 181-183, claims 12-13, drawn to a method for increasing cell growth in plants, by inhibiting human, rat or mouse TMEFF1, using an derivative of human, rat or mouse TMEFF1 polypeptide. A method using each of the derivatives constitutes a single, distinct invention.

Groups 184-186, claims 12-13, drawn to a method for increasing cell growth in plants, by inhibiting human, rat or mouse TMEFF1, using an antisense to human, rat or mouse TMEFF1 nucleic acid. A method using each of the antisenses constitutes a single, distinct invention.

Groups 187-189, claims 14-17, drawn to a method for differentiating stem cells, using an antibody to human, rat or mouse TMEFF1. A method using each of the antibodies constitutes a single, distinct invention.

Groups 190-192, claims 14-17, drawn to a method for differentiating stem cells, using an antisense of human, rat or mouse TMEFF1 nucleic acid. A method using each of the antisenses constitutes a single, distinct invention.

The inventions listed as Groups 1-192 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Art Unit: 1642

According to PCT Rule 13.2, unity of invention exists only when the shared same or corresponding technical feature is a contribution over the prior art. The inventions listed as groups 1-192 do not relate to a single general inventive concept because they lack the same or corresponding special technical feature. The technical feature of the claimed invention, TMEFF1 protein or nucleic acid is known in the art, as disclosed in the instant specification (p.6, last paragraph, bridging p.7). Thus the technical feature of the claimed invention lacks novelty and does not make a contribution over the prior art.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement may be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MINH-TAM DAVIS whose telephone number is 571-272-0830. The examiner can normally be reached on 9:00 AM-5:30 PM.



Art Unit: 1642

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LARRY HELMS can be reached on 571-272-0832. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MINH TAM DAVIS  
November 20, 2007

/Larry R. Helms/

Supervisory Patent Examiner